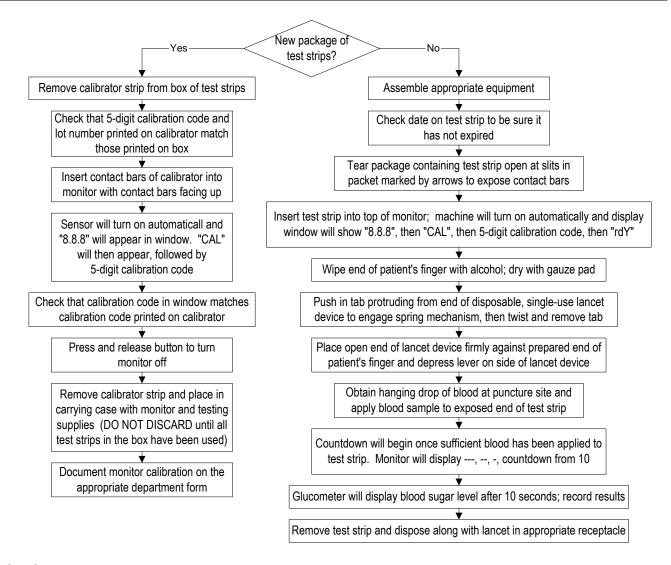
Initial: 5/96 Reviewed/revised: 5/21/08 Revision: 3

## MILWAUKEE COUNTY EMS PRACTICAL SKILL BLOOD GLUCOSE

Approved by: Ronald Pirrallo, MD, MHSA
Signature:
Page 1 of 1

### MONITORING USING THE PRECISION Xtra® MONITOR

| Purpose:  |                                     | Indications:   |                                |                       |  |
|---|-------------------------------------|--|--------------------------------|-----------------------|--|
| To obtain a blood sample and use the Precision  |                                     | Altered level of   | Altered level of consciousness |                       |  |
| Xtra® monitor for analysis of blood sugar level |                                     | Known diabetic with signs/symptom of hypo or hyperglycemia |                                |                       |  |
| Advantages:                                     | Disadvantages:                      |  | Complications:                 | Contraindications:    |  |
| Provides accurate                               | Painful fingerstick                 |  | None                           | Extreme environmental |  |
| measurement of                                  | Patients on oxygen therapy may have |  |                                | temperatures          |  |
| blood glucose level                             | false low result                    |  |                                | Severe dehydration    |  |
| Quick and easy to use                           | Anemic patients may have false high |  |                                | Patients in shock     |  |
|   | result                              |  |                                |                       |  |



#### **NOTES:**

• The Precision Xtra® device must be recalibrated for every new box of strips opened. Recorded the calibration check as specified by department policy.

Initial: 9/94

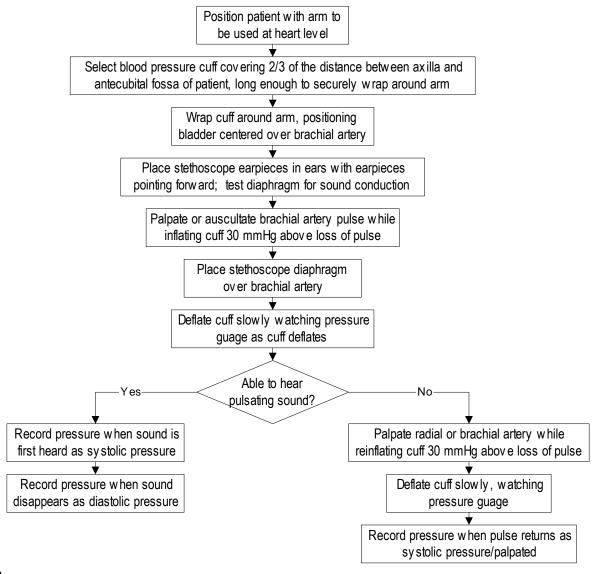
Reviewed/revised: 5/21/08

Revision: 3

# MILWAUKEE COUNTY EMS PRACTICAL SKILL BLOOD PRESSURE MEASUREMENT

| Approved by: | Ronald Pirrallo, MD, MHSA |
|--------------|---------------------------|
| Signature:   |                           |
| Page 1 of 1  |                           |

| Purpose:   |  |     | Indications: |                    |
|--|--|-----|--------------|--------------------|
| To measure and monitor the systolic and diastolic blood pressure       |  |     | All patients |                    |
| Advantages:  | Disadvantages:                               | Coi | mplications: | Contraindications: |
| Multiple readings enable monitoring of patient's hemodynamic stability | Improperly sized cuff may give false reading | Nor | ne           | None               |



- A blood pressure cuff covering more than 2/3 of the upper arm will give a false low reading. A blood pressure cuff covering less than 2/3 will give a false high reading.
- Blood pressures should be auscultated whenever possible. The palpation method should only be used when
  environmental noise or conditions make it difficult to hear through the stethoscope.

Initial: 10/10/07

Reviewed/revised: 5/21/08

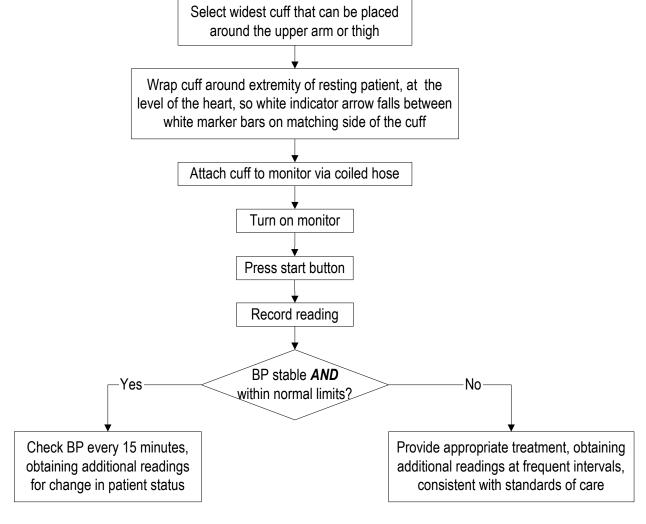
Revision: 1

## MILWAUKEE COUNTY EMS PRACTICAL SKILL BLOOD PRESSURE

Approved by: Ronald Pirrallo, MD, MHSA
Signature:
Page 1 of 1

**MONITORING - NON-INVASIVE** 

| <b>Purpose:</b> To obtain non-invasive blood pressure readings for assessment and monitoring of patients transported by EMS   |   | <b>Indications:</b> Any patient over one year of age. |   |
|---|---|---|---|
| Advantages: Disadvantages:  |   | Complications:  | Contraindications:  |
| Takes less time than a manual blood pressure; able to perform other tasks while obtaining blood pressure; able to track changes in blood pressure in response to interventions. | May underestimate diastolic blood pressure, especially in children. | None  | Not to be used on limbs with suspected compromise in blood flow |



#### NOTES:

When reading the blood pressure values on the display, keep in mind the following conditions can influence NIBP
measurements: patient position; position of cuff relative to patient's heart; physical condition of the patient; patient
limb movements; convulsions or tremors; very low pulse volumes; PVCs; vibration due to moving vehicles;
improper cuff size or application.

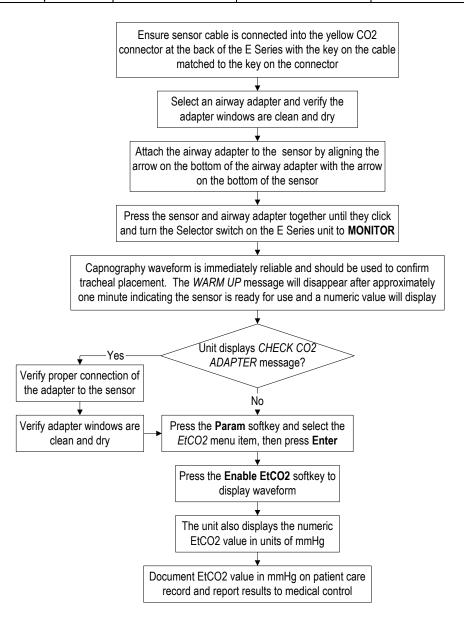
| Initial: 5/21/08  |  |
|-------------------|--|
| Reviewed/revised: |  |
| Revision:         |  |

## MILWAUKEE COUNTY EMS PATIENT MONITORING END TIDAL CARBON

| Approved by: | Ronald Pirrallo, MD, MHSA |
|--------------|---------------------------|
| Signature:   |                           |
| Page of      |                           |

**DIOXIDE (EtCO<sub>2</sub>) MONITORING** 

| Purpose:                                | Indications:   |                |                    |  |
|---|--|----------------|--------------------|--|
| To aid confirmation of proper placement | For continuous noninvasive monitoring of end tidal carbon dioxide in |                |                    |  |
| of advanced airway                      | all patients with an advanced airway in place.                       |                |                    |  |
| Advantages:                             | Disadvantages:   | Complications: | Contraindications: |  |
| Noninvasive                             | None   | None           | None               |  |
| Rapid confirmation of correct placement |  |                |                    |  |



- Verify and document waveform is consistent with tracheal placement within 1 minute of intubation.
- Check level after administering 6 breaths. A false positive reading is possible in an esophageal intubation if the patient consumed a carbonated beverage prior to intubation.

Initial: 9/92

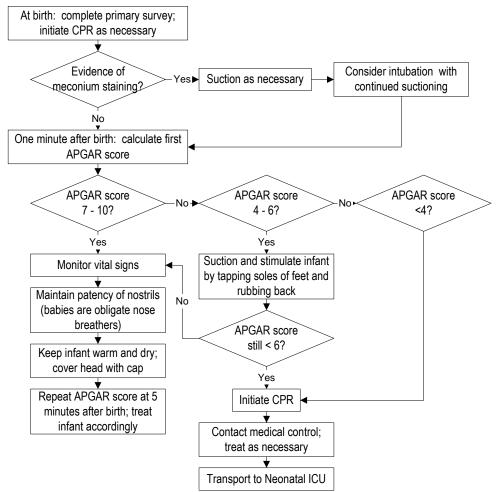
Reviewed/revised: 5/21/08

Revision: 4

# MILWAUKEE COUNTY EMS PRACTICAL SKILL NEWBORN CARE AND ASSESSMENT

| Approved by: | Ronald Pirrallo, MD, MHSA |
|--------------|---------------------------|
| Signature:   |                           |
| Page 1 of 1  |                           |

| Purpose:                                | Indications:   |  |
|---|----------------|--|
| To assess and care for a newborn infant | Newborn infant |  |



### **APGAR SCORE**

| CRITERIA                                | O POINTS | 1 POINT                         | 2 POINTS       |
|---|----------|---------------------------------|----------------|
| Appearance (color)                      | Cyanotic | Body pink, extremities cyanotic | Pink           |
| Pulse                                   | Absent   | < 100/minute                    | >100/minute    |
| <b>Grimace</b> (response to suctioning) | None     | Weak                            | Vigorous       |
| Activity (muscle tone)                  | Limp     | Weak                            | Vigorous       |
| Respiratory Effort                      | None     | Slow, irregular                 | Strong, crying |

- If it's necessary to position the newborn on the back, pad the shoulders to prevent airway obstruction.
- If newborn's pulse is less than 80, begin chest compressions at 100/minute.
- The umbilical vein should be used for IV access if needed.

Initial: 7/94

Reviewed/revised: 5/21/08

Revision: 3

# MILWAUKEE COUNTY EMS PRACTICAL SKILL ORTHOSTATIC BLOOD PRESSURE MEASUREMENT

| Approved by: | Ronald Pirrallo, MD, MHSA |
|--------------|---------------------------|
| Signature:   |                           |
| Page 1 of 1  |                           |

| Purpose:   |                  |                                      | Indications: |                       |
|--|------------------|--------------------------------------|--------------|-----------------------|
| To measure postural blood pressure changes in patients with suspected hypovolemia. |                  | Patients with suspected hypovolemia. |              |                       |
| Advantages:  | Disadvantages:   | Complicatio                          | ns:          | Contraindications:    |
| Multiple readings enable   | Improperly sized | Change in position may cause         |              | Supine systolic blood |
| monitoring of patient's  | cuff may give    | hypotension with associated          |              | pressure <90          |
| hemodynamic stability  | false reading    | symptoms                             |              |                       |

Take and record systolic and diastolic blood pressure and pulse while patient is supine

Have patient stand, assisting as necessary

Observe carefully for associated signs and symptoms, protecting patient from falling

After 30 seconds, repeat blood pressure and pulse measurements
(A drop in systolic pressure of 20 mmHg or increase in pulse rate of 20/minute is significant)

### **NOTES:**

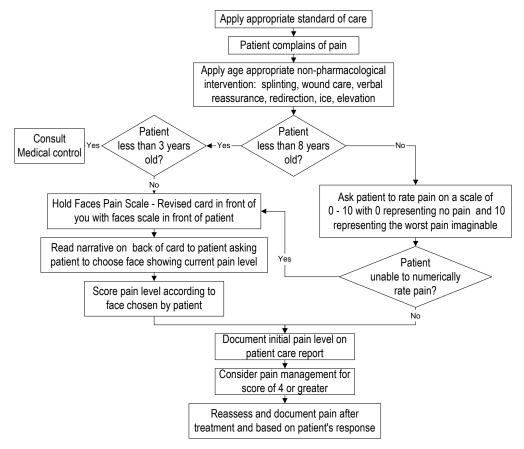
• Orthostatic (postural) hypotension is a drop in both systolic and diastolic blood pressure with a change from supine to sitting or standing position. It is generally accompanied by dizziness, blurred vision and/or syncope.

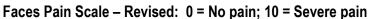
| Initial: 5/21/08  |  |
|-------------------|--|
| Reviewed/revised: |  |
| Revision:         |  |

### MILWAUKEE COUNTY EMS PRACTICAL SKILL PAIN ASSESSMENT

| Approved by: | Ronald Pirrallo, MD, MHSA |
|--------------|---------------------------|
| Signature:   |                           |
| Page 1 of 1  |                           |

| Purpose:   | urpose: Indications:   |                            |                    |
|--|--|----------------------------|--------------------|
| To enable providers to assess a patient's pain severity  |  | For all patients with pain |                    |
| Advantages:  | Disadvantages:   | Complications:             | Contraindications: |
| Simple, standardized, reliable nonintrusive, consistent units Easy to administer and score Age-appropriate | Varies from patient to patient May be difficult for patient to rate their pain | None                       | None               |









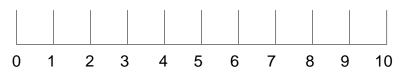








Numeric Pain Scale: 0 = No pain; 10 = Severe pain



Initial: 9/92

Reviewed/revised: 5/21/08

Revision: 3

## MILWAUKEE COUNTY EMS PRACTICAL SKILL PHYSICAL ASSESSMENT

Approved by: Ronald Pirrallo, MD, MHSA Signature:
Page 1 of 1

| Purpose:  | Indications: |
|---|--------------|
| To complete a primary and secondary survey of patient                   | All patients |
| To identify life threatening or potentially life-threatening conditions | -            |
| To establish a working assessment                                       |              |
| To prioritize treatment   |              |

Survey scene for information and potential hazards to personnel: hazards, potential number of patients, need for additional or specialized equipment, manpower; environment (mechanism of injury, living conditions, etc.)

Make patient contact, establish baseline level of consciousness; identify self, explain role if time and patient condition permits

Assess patient's airway; consider need for C-spine stabilization; monitor for patency of ariway, need for adjuncts to control airway; open airway of unresponsive patients (chin lift or jaw thrust)

Assess breathing: look for chest movement, listen and feel for air exchange; ventilate with pocket mask or bag-valve device if patient is not breathing or exchange is not adequate; suction as necessary; start supplemental oxygen as soon as possible at rate and with device appropriate for patient's condition

Assess circulatory status: check central and peripheral pulses; look for signs of hemorrhage, apply direct pressure to bleeding wounds; evaluate capillary refill; look for cyanosis, diaphoresis; begin CPR as needed; establish IV as needed

Perform cursory body survey to identify "Load and Go" situations: uncontrolled airway, uncontrolled hemorrhage with potential for exanguination; complications of childbirth

Obtain baseline vital signs: systolic and diastolic blood pressure; peripheral or central pulse; respiratory rate and effort; level of consciousness (alert, responds to verbal stimulus, responds to painful stimulus, unresponsive)

Obtain history of present problem: chief complaint, location; description; onset, duration; precipitating factors; prior intervention; associated symptoms

Assess head and face: re-ev aluate airway; signs of trauma (wounds, contusions, fractures); blood or discharge from ears or nose; pupil size and reaction; presence of identifiable odors

Assess neck: signs of trauma; carotid pulse; midline trachea; jugular vein distention; subcutaneous emphysema

Assess chest signs of trauma (wounds, flail segments, bruises); pain; subcutaneous emphysema; listen to breath sounds

Assess abdomen: signs of trauma (wounds, bruises); pain; distention; pregnancy; rigidity

Assess pelvis and buttocks: signs of trauma/deformity; signs of bleeding (rectal or vaginal); presence of secretions; pain

Assess upper and lower extremities: signs of trauma/deformity; pain; pitting edema; circulation, sensation, movement

Establish working assessment

Prioritize interventions

▼

Contact medical control as necessary

| Initial: 5/21/08  |  |
|-------------------|--|
| Reviewed/revised: |  |
| Revision:         |  |

# PRACTICAL SKILL PULSE OXIMETRY (Sp02) MONITORING

| Approved by: | Ronald Pirrallo, MD, MHSA |
|--------------|---------------------------|
| Signature:   |                           |
| Page 1 of 1  |                           |

| Purpose: For measurement of oxygen saturation of arteriolar |                               | Indications: For use in adult, pediatric, and |                    |                    |
|---|-------------------------------|---|--------------------|--------------------|
| hemoglobin at a peripheral measurement site.                |                               | neona   | neonatal patients. |                    |
| Advantages:   | Disadvantages:                |   | Complications:     | Contraindications: |
| Allows continuous noninvasive                               | Could have erroneous readings |   | None               | None               |
| monitoring.   | in some patient conditions    |   |                    |                    |

Place selected digit over sensor window, making sure sensor cable runs over the top of the patient's hand. The fleshiest part of the digit should cover the detector window in the lower half of the sensor.

Ensure sensor cable and SpO2 connector at the back of the E-Series unit are connected.

Turn selector switch to MONITOR. The SpO2 parameter box will appear momentarily on the screen.

Verify sensor's red LED is on. Oximeter is now fully operational. (A dashed line is displayed in SpO2 field until a pulse is detected. Once measurement has been established, saturation values are displayed in numeric field.)

Ensure appropriate oxygen saturation values are displayed and the signal strength bar indicates the presence of a strong signal associated with each heartbeat.

If ECG leads are not attached, patient's pulse rate as measured by the SpO2 sensor is displayed as the Heart Rate (HR) in the ECG field and the heart symbol does not flash.

- Do not attach the SpO<sub>2</sub> sensor to a limb being monitored with a blood pressure cuff or with restricted blood flow.
- Patient conditions such as cold extremities or smoke inhalation may result in erroneous oxygen saturation measurements. Assess the patient for other signs/symptoms of adequate oxygenation.